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09/676,681	09/29/2000	Andrew H. McMillan	7287-000012	3462

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EXAMINER	
VO, TED T	

ART UNIT	PAPER NUMBER
2122	8

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/676,681	Applicant(s) MCMILLAN ET AL.	
	Examiner Ted T. Vo	Art Unit 2122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is in response to the communication filed on 7/14/2003.

Claims 1, 8, 11, 15, and 21 are amended. Claims 1-21 are pending in the application.

Drawings are amended. The drawings are only approved by the examiner for examination purpose.

Response to Arguments

2. Applicants' arguments for the amended claims have been considered. However, the arguments are not persuasive.

-With referring to the claim 1, applicants argue that Logan does not show a reason code module for assigning fist and second to first and second flowchart blocks to capture operation mode and the process.

Examiner responds: First, examiner would like to address that it does not necessary to a prior art to write out an exact term if the prior art performs similar means. Even though the claim recites a reason code module, the claim 1 merely recites means for assigning first and second reason code to the process by said first and second flowchart blocks in said flowchart source code to capture operational modes of said process. The specification (page 7, lines 7-3) shows the reason code as a status of the process in the flowchart described by actions or decision block.

In this manner, Logan shows an editor that connects to the compiler (figure 5). The editor allows code to enter. In the flowchart, particularly shown in figure 6A, it shows code Error = 35 Turn on (reason). Similarly to the specification that discloses the status code that assigns to an operational state of the process, the reference provides a status to turn on, or not to turn on a process.

- Applicants further cite column 4, line 1-66 to discuss that Logan is directed toward the debugging flowchart, cite column 8, lines 46-49 to discuss that Logan intends for the debugger to be run while the flowchart is unstable, cite column 4, lines 1-15 to discuss the flowchart at the point of the interrupt during the debugging. Thereby, applicants argues they do not intend to use unstable flowchart code of the

reference which is different to the assigned multiple reason codes to the flowchart to capture operational modes of the process (Remarks, page 14, 20-25).

Examiner responds: Even the argument tries to associate the teaching of the reference with the debugging mode; the prior art (figure 4A) and the applicants' specification do the same process. The prior art also discloses using the flowchart code to control a machine before a flowchart program being debugged. Debugging is provided only for correcting the code input in the flowchart. The execution of the flowchart remains the same sense of a real execution of a control machine system (see column 3, lines 44-57). Association of code used in the flowchart with unstable code is not correct. The code in the flowchart is still inherent in the sense of control operation system as shown in the figure 4A. Users only add an additional set of flowchart block (column 4, lines 21-22), set breakpoints (see column 8, line 18-20) to view and control the execution. Therefore, the code: Air pressure is too low then Turn on, (figure 6B, turn on) is interpreted as reason code according to the specification and claim language. Applicants in the response have not addressed the citation indicated by the examiner as reason code (figure 6A, 156).

- With regards to the argument to claim 6, applicants argue that Logan fails to show a performance analysis module for recording the reason code.

Examiner responds: First of all, claim 6 is a claim that is dependent on claim 1. As addressed, the examiner contends the reference teaching claim 1.

Logan discloses a machine control system that includes a flowchart program to control the operation of the machine and the specification discloses a flowchart based programming control system associated with a process (spec's abstract). In the claim 6, it has merely means "*records when said first and second reason occur*". With respect to reason code, examiner cites block 156 in which, without debugging purpose, the code turns on an operation of the air pressure. Therefore, recording of an occurrence is inherent in the operation of the machine as an output (column 3, lines 50-57) when the machine intercepts the running code. This is shown in the reference as I/O and the feedback of a machine (figure 4A and 4B). On the other hand, the reference shows the debugging can intercepts the execution of flowchart blocks (started from column 7, lines 47 to column 8, lines 28).

Since the claim attempts to broaden its breadth, the citation reads the broaden scope.

- With regards to the arguments to claim 11 and claim 15, since the claims have the functionality corresponding to claim 1, thus they are also rejected in the same reason as discussed and addressed to claim 1 above.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> Or,
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-6, 8-9, 11-13, 15-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Logan, III (US 6,243,857).

The following claims are given the broadest reasonable interpretation in light of the specification.

As per claim 1:

"A flowchart-based programming and control system comprising:

A computer including a processor, memory and a display; a device that is connected to said computer and is associated with a process (see figure 5, blocks 142, 144, and 140); *a flowcharting module run by said computer that generates and edits flowchart source code that includes flowchart blocks and contains logic for operating said device to further said process* (see figure 6A, a flowchart to be generated and edited), *wherein first and second blocks change an operational state of said process* (See figure 6A: blocks which are connected to decision block)*;and a reason code module associated with said flowcharting modules that assigns the first and second reason codes to said first and second flowchart blocks* (see editing and generating means 142 figure 5, see assigned code such as the code in block156 figure 6A)*" to capture operational mode of said process* (see column 3, lines 50-57, and figure 6A, feature 156).

Logan teaches a flowchart mechanism (figure 5) that interacts between a flowchart editor and a connected machine. The flowchart mechanism allows a program to be generated by using flowchart elements. Users edit the flowchart and generate code for a process that operates the device (see flow code in figure 6A). As seen in figure 6A, a decision block (162) causes two different states of the process to be executed; one of the two blocks is block 156.

As per claim 2: See figure 5, a compiler (148) is connected to the flowchart generator.

As per claim 3: See figure 5, an executive portion (144) is connected to the compiler and the engine.

As per claim 4: See column 3, lines 43-47, where Logan mentions that the execution of the machine is with respect to the direction of the flowchart. The first reason code is in the sense toward the direction of "then" or "else" in figure 6A.

As per claim 5: See column 3, lines 43-47, where Logan mentions that the execution of the machine is with respect to the direction of the flowchart.

As per claim 6: Inherent from execution and debugging (started from column 7, lines 47 to column 8, lines 28).

As per claim 8: Inherent from flowchart elements given in the toolbars, where a user might use to design a subchart (figure 6A). Logan mentions a block has a subchart (column 8, lines 50-61).

As per claim 9: Inherent from flowchart instructions and the behavior of the machine. Logan mentions a button might be used to select active blocks (column 8, lines 50-61).

As per claim 11: Claim 11 has claimed functionality corresponding to the functionality of claim 1. Claim 11 is rejected in the same reason set forth in connecting to the rejection of claim 1.

As per claim 12: Claim 12 has claimed functionality corresponding to the functionality of claim 2. Claim 12 is rejected in the same reason set forth in connecting to the rejection of claim 2.

As per claim 13: Claim 13 has claimed functionality corresponding to the functionality of claim 6. Claim 13 is rejected in the same reason set forth in connecting to the rejection of claim 6.

As per claim 15: Claim 15 is a method that incorporated with the flowchart mechanism claimed by claim 1. Logan has shown the figure 6A that provides a user to use the flowchart elements to grenade and to assign flowchart source code. Claim 15 has claimed functionality corresponding to the functionality of claim 1. Claim 15 is rejected in the same reason set forth in connecting to the rejection of claim 1.

As per claim 16: Claim 16 has claimed functionality corresponding to the functionality of claim 2. Claim 16 is rejected in the same reason set forth in connecting to the rejection of claim 2.

As per claim 17: Claim 17 has claimed functionality corresponding to the functionality of claim 3. Claim 17 is rejected in the same reason set forth in connecting to the rejection of claim 3.

As per claim 18: Claim 18 has claimed functionality corresponding to the functionality of claim 4. Claim 18 is rejected in the same reason set forth in connecting to the rejection of claim 4.

As per claim 19: Claim 19 has claimed functionality corresponding to the functionality of claim 5. Claim 19 is rejected in the same reason set forth in connecting to the rejection of claim 5.

As per claim 20: Claim 20 has claimed functionality corresponding to the functionality of claim 6. Claim 20 is rejected in the same reason set forth in connecting to the rejection of claim 6.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 14, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan, III (US 6,243,857) in view of Maejima et al. (5,327,568).

As per claim 7:

Logan teaches a flowchart mechanism (figure 5) that interacts between a flowchart editor and a connected machine. The flowchart mechanism allows a generated program to be executed for processing the machine by the output data (as admitted by Logan as output that goes to process the machine (figure 3: the output that processes the machine 64; figure 4A: the output that processes the machine 106; figure 5: the output the processes the machine 140).

However, in Logan, the output from the execution for controlling the machine is focused for debugging purposes. Logan does not explicitly address the execution to generate the output that graphically represents the performance analysis.

Maeijma provides an apparatus to support graphic data driven. Maeijma provides the execution of data driven program expressed by graphic presentation modeled by graphical data flow (see Maeijma background: column 1). With regard to the display of output data, Maeijma shows an instruction display section 500 (figure 1) that is connected to a display terminal. The output data representing the instruction execution is displayed in animation concurrently (see Maeijma: started from column 18, lines 22 to column 19, lines 25) with inputs in the execution.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to include a module that records and displays graphically the outputs of a graphic element of a data driven program as disclosed in Maeijma, into the teaching for analyzing and debugging the execution of flowchart elements in Logan III. Doing so would easy the analysis provided from visual recognition.

As per claims 14, 21:

In further view of claims 11-13, where claims 14 and 21 are dependent on claim 13, claims 14 and 21 further provide the analysis that graphically represents the data in which the claimed functionality is the same as the functionality given in claim 7. Claims 14, 21 are rejected in the same reason set forth in connecting to the rejection of claim 7.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Logan, in further view of common network communications.

As per claim 10:

Logan does not teach a connection of his flowchart mechanism to a server. However, communications is known at the time of the disclosed reference and claimed invention. It is known that client/server has the ability of remote accessibility.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to include communications for remote access, and thus to allow a computer to access data of another computer. Doing so would take advantage of all availabilities such as modem, servers, wire or wireless, provided by network communications to bring operations of two computers together, and this is used very common in communications.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (703) 308-9049. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM ET. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam, can be reached on (703) 305-4552.

The fax phone numbers for this Group are:

Official: (703) 746-7239; After Final: (703) 746-7238; Non-Official: (703) 746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

TUAN DAM
SUPERVISORY PATENT EXAMINER

TTV
October 1, 2003